(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 30 October 2003 (30.10.2003)

PCT

(10) International Publication Number WO 03/089777 A1

(51) International Patent Classification7: F02M 25/028

(21) International Application Number: PCT/FI03/00303

(22) International Filing Date: 16 April 2003 (16.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

20020756 19 April 2002 (19.04.2002) F

(71) Applicant (for all designated States except US): MAR-IOFF CORPORATION OY [FI/FI]; P.O.BOX 25, Hakamäenkuja 4, FIN-01511 Vantaa (FI).

(72) Inventor; and

15

(75) Inventor/Applicant (for US only): SUNDHOLM, Göran [FI/FI]; Ilmari Kiannon kuja 3, FIN-04310 Tuusula (FI).

(74) Agent: HEINÄNEN OY; Annankatu 31-33 C, FIN-00100 Helsinki (FI).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

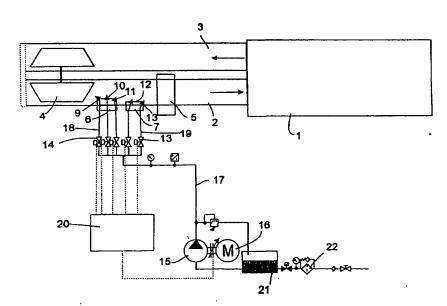
of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WATER SPRAYING SYSTEM



(57) Abstract: A water spraying system, especially for the humidification of the intake air of a piston engine to reduce nitrogen oxide emissions, said system comprising at least one nozzle (9, 10, 11, 12, 13) for spraying an aqueous liquid mist into the air intake duct (2) and means for conveying the liquid to be sprayed to the nozzle. The system comprises means for accomplishing the injection of a spray of aqueous liquid mist to at least one point in the air intake duct (2) depending on the load and/or speed of rotation and/or temperature of the engine.

3/089777 A1